

**REMARKS**

Applicant thanks the Examiner for his thoughtful review of the present application. The amendments to the claims are described below in the **PRESENT AMENDMENT**. The status of the claims is as follows:

- a. Method **Claims 1 – 20** are pending in the present application and were elected without traverse for examination on the merits by Applicant pursuant to a phone **Restriction Requirement of June 16, 2005**;
- b. Apparatus **Claims 21 - 34** are withdrawn from consideration pursuant to aforementioned **Restriction Requirement**; and
- c. Independent **Claims 1 and 11** have been **Amended** herein.

i. **Terminal Disclaimer Pursuant to 37 C.F.R. § 1.321(c)**

Attached herewith is a **Terminal Disclaimer** in compliance with **37 C.F.R. § 1.321(c)** and referencing Published US Application No. **2005/0090056** and Published US Application No. **2005/0090119**.

ii. **PRESENT AMENDMENT**

Independent **Claims 1 and 11** were amended to distinctly point out and particularly claim the subject matter the Applicant regards as his invention. Specifically, those claims now recite that only a single layer of the first mask layer **25p** is formed on the etch stop layer **12**. Support for the amendments can at least be found in **FIGS. 9 – 10d** of the **Drawings** and **Pages 12 – 13** of the **Detailed Description**. Additionally, those claims were amended to recite that the dielectric layer **31** is planarized to form a substantially planar surface **31s** that is co-planar with an exposed portion **25s** of the first mask layer **25**. Support for the amendment can at least be found in **FIGS. 10a and 10b** of the **Drawings** and in the first paragraph on **Page 15** of the **Detailed Description**.

No new matter was introduced in amending the claims.

iii. **ARGUMENT**

a. **Objections to Informalities in Claims 1 and 11**

In the Office Action, the Examiner objected to the words “layer form” and stated that the wording should apparently be “layer to form.” The objections to the informalities in **Claims 1** and **Claim 11** are mooted by the amendments to those claims. Accordingly, the objections to **Claims 1** and **Claim 11** ought to now be withdrawn.

b. **Provisional Rejection of Claims 1, 5 – 11, and 15 – 20 under Nonstatutory Double Patenting (*Lee I, Costrini, & Chen*)**

The attached **Terminal Disclaimer** pursuant to **37 C.F.R. §1.321(c)** and referencing Published US Application No. **2005/0090056** (*Lee I*) and Published US Application No. **2005/0090119** (*Lee II*) overcomes the provisional rejection of **Claims 1, 5 – 11, and 15 – 20** under Nonstatutory Double Patenting. Therefore the rejection of those claims ought to now be withdrawn.

Moreover, independent **Claims 1** and **11** as amended herein are non-obvious and patentably distinct over the combination of cited references. *Costrini* is silent and teaches away from a single layer of a first mask layer **25p**. For instance, mandrel 60 in Fig. 3 and paragraphs 0017 – 0020 of *Costrini* disclose the mandrel 60 as comprising several layers of material, such a SOG 61, nitride 62, and oxide 64.

Furthermore, *Chen* is also silent and teaches away from using a single layer of a first mask layer **25p**, because in col. 4, lines 19 – 67 and in Figs. 3 – 10, *Chen* only discloses a top layer 30 (e.g. a conductive barrier layer of tantalum Ta) on top of the TMR cells 10. No where in the cited sections of *Chen* is there a mask layer on the top layer 30. The next layer to be deposited on the top layer 30 is the spacer layer 40 (Fig. 4) or the filler dielectric 70 (Figs. 6 and 7) and those layers are not used as a mask layer.

Consequently, because all of the claim limitations of independent Claims 1 and 11 are not taught or suggested by the cited references, the provisional rejection of **Claims 1, 5 – 11, and 15 – 20** under Nonstatutory Double Patenting in view of *Lee I*, *Costrini*, and *Chen*, considered individually or in any combination, ought to now be withdrawn.

Because dependent **Claims 5 – 10 and 15 – 20** depend from independent **Claims 1 and 11** respectively and inherit all of the limitations of their respective base claims, the provisional rejection of dependent **Claims 5 – 10 and 15 – 20** under Nonstatutory Double Patenting in view of *Lee I*, *Costrini*, and *Chen*, considered individually or in any combination, ought to now be withdrawn.

**c. Provisional Rejection of Claims 2 – 4 and 12 – 14 under Nonstatutory Double Patenting (*Lee I*, *Costrini*, *Chen*, & *Wolf I*)**

The attached **Terminal Disclaimer** pursuant to **37 C.F.R. § 1.321(c)** and referencing Published US Application No. **2005/0090056** (*Lee I*) and Published US Application No. **2005/0090119** (*Lee II*) overcomes the provisional rejection of **Claims 2 – 4 and 12 – 14** under Nonstatutory Double Patenting. Therefore the rejection of those claims ought to now be withdrawn.

Moreover, for at least the same reasons as argued in (b) above, the cited sections of *Lee I*, *Costrini*, *Chen*, and *Wolf I*, do not teach or suggest all of the claim limitations of independent **Claims 1 and 11** from which dependent **Claims 2 – 4 and 12 – 14** depend. Accordingly, the provisional rejection of dependent **Claims 2 – 4 and 12 – 14** under Nonstatutory Double Patenting in view of *Lee I*, *Costrini*, *Chen*, and *Wolf I*, considered individually or in any combination, ought to now be withdrawn.

**d. Provisional Rejection of Claims 1, 5, 7 – 11, 15, and 17 – 20 under Nonstatutory Double Patenting (Lee II & Chen)**

The attached **Terminal Disclaimer** pursuant to **37 C.F.R. § 1.321(c)** and referencing Published US Application No. **2005/0090056** (*Lee I*) and Published US Application No. **2005/0090119** (*Lee II*) overcomes the provisional rejection of **Claims 1, 5, 7 – 11, 15, and 17 – 20** under Nonstatutory Double Patenting. Therefore the rejection of those claims ought to now be withdrawn.

Furthermore, for at least the same reasons as argued in (b) above, the cited sections of *Lee II* and *Chen*, do not teach or suggest all of the claim limitations of independent **Claims 1 and 11**. Accordingly, the provisional rejection of independent **Claims 1 and 11** and dependent **Claims 5, 7 – 10, 15, and 17 – 20** under Nonstatutory Double Patenting in view of *Lee II* and *Chen*, considered individually or in any combination, ought to now be withdrawn.

**e. Provisional Rejection of Claims 6 and 16 under Nonstatutory Double Patenting (Lee II, Chen, & Costrini)**

The attached **Terminal Disclaimer** pursuant to **37 C.F.R. § 1.321(c)** and referencing Published US Application No. **2005/0090056** (*Lee I*) and Published US Application No. **2005/0090119** (*Lee II*) overcomes the provisional rejection of **Claims 6 and 16** under Nonstatutory Double Patenting. Therefore the rejection of those claims ought to now be withdrawn.

For at least the same reasons as argued in (b) above, the cited sections of *Lee II*, *Costrini*, and *Chen*, do not teach or suggest all of the claim limitations of independent **Claims 1 and 11**. Accordingly, the provisional rejection of dependent **Claims 6 and 16** under Nonstatutory Double Patenting in view of *Lee II*, *Costrini*, and *Chen*, considered individually or in any combination, ought to now be withdrawn.

**f. Provisional Rejection of Claims 2 – 4 and 12 - 14 under Nonstatutory Double Patenting (Lee II, Wolf I, & Chen)**

The attached **Terminal Disclaimer** pursuant to **37 C.F.R. § 1.321(c)** and referencing Published US Application No. **2005/0090056** (*Lee I*) and Published US Application No. **2005/0090119** (*Lee II*) overcomes the provisional rejection of **Claims 2 – 4 and 12 - 14** under Nonstatutory Double Patenting. Therefore the rejection of those claims ought to now be withdrawn.

For at least the same reasons as argued in (b) above, the cited sections of *Lee II*, *Wolf I*, and *Chen*, do not teach or suggest all of the claim limitations of independent **Claims 1 and 11**. Accordingly, the provisional rejection of dependent **Claims 2 – 4 and 12 – 14** under Nonstatutory Double Patenting in view of *Lee II*, *Costrini*, and *Chen*, considered individually or in any combination, ought to now be withdrawn.

**g. Rejection of Claims 1, 5 – 9, 11, and 15 – 19 under 35 U.S.C. §102(e)/103(a) (Costrini)**

For a prima facie case of anticipation under **§102(e)** to stand, the cited reference must inherently or explicitly disclose all elements of a rejected claim. For a prima facie case of obviousness under **§103(a)** to stand, the cited reference must teach or suggest all limitations of a rejected claim.

For at least the same reasons as argued in (b) above, *Costrini* does not explicitly or inherently disclose “a single layer of a first mask layer on the etch stop layer” as is now recited in independent **Claims 1 and 11**, because *Costrini* disclose his mandrel 60 as comprising several layers of material. Moreover, *Costrini* teaches away from a single layer by disclosing the mandrel 60 as comprising several layers of material.

Consequently, **Claims 1 and 11** are not anticipated by, are non-obvious, and are patentably distinct over the cited sections of *Costrini* and the rejection of those claims under **35 U.S.C. §102(e)/103(a)** ought to now be withdrawn. Because **Claims 5 – 9** and

**15 – 19** depended from **Claims 1 and 11** respectively and inherit all of the limitations of those claims, it follows that **Claims 5 – 9 and 15 – 19** are not anticipated by, are non-obvious, and are patentably distinct over the cited sections of *Costrini* and the rejection of those claims under **35 U.S.C. §102(e)/103(a)** ought to now be withdrawn.

**h. Rejection of Claims 2 – 4 and 12 – 14 under 35 U.S.C. 103(a) (*Costrini & Wolf I*)**

For at least the same reasons as argued in (b) above, *Costrini* and *Wolf I* taken individually or in combination do not teach all of the limitations as set forth in independent **Claims 1 and 11** from which **Claims 2 – 4 and 12 – 14** depend respectively. Furthermore, *Costrini* teaches away from a single layer by disclosing the mandrel 60 as comprising several layers of material. Accordingly, the rejections of **Claims 2 – 4 and 12 – 14** under **35 U.S.C. 103(a)** in view of *Costrini* and *Wolf I* ought to now be withdrawn.

**i. Rejection of Claims 10 and 20 under 35 U.S.C. 103(a) (*Costrini & Chen*)**

For at least the same reasons as argued in (b) above, *Costrini* and *Chen* taken individually or in combination do not teach all of the limitations as set forth in independent **Claims 1 and 11** from which **Claims 10 and 20** depend respectively. Furthermore, *Costrini* teaches away from a single layer by disclosing the mandrel 60 as comprising several layers of material and *Chen* teaches away from using any mask layer at all. Accordingly, the rejections of **Claims 10 and 20** under **35 U.S.C. 103(a)** in view of *Costrini* and *Chen* ought to now be withdrawn.

iv. **CONCLUSION**

Applicant now believes the present case to be in condition for allowance. Therefore, the Applicant respectfully requests a Notice of Allowance for this application from the Examiner.

Respectfully submitted,

A handwritten signature in black ink that reads "Brian R. Short". The signature is written in a cursive, flowing style.

Brian R. Short

Reg. No. 41,309